

$^{16}\text{O}(^7\text{Li},^6\text{Li})$ [1973Sc26](#)

[1973Sc26](#): An $E(^7\text{Li})=36$ MeV ion beam impinged on a $^{28}\text{Si}^{16}\text{O}_2$ target at the Heidelberg MP Tandem Van de Graaff accelerator.

A scattering chamber including four movable ΔE -E detector telescopes, mounted at 15° intervals at a distance of ≈ 20 cm from the target was used. The particle was identified by multiplication units with outputs proportional to $M=\Delta E(E+a\Delta E+b\Delta E^2)$. The ground state and five excited states of ^{17}O were observed and the optical model parameters using DWBA calculations were deduced.

[1988Ke07](#): $^{16}\text{O}(^7\text{Li},^6\text{Li})$, $E=34$ MeV; measured $\sigma(\theta)$.

Theory:

[1986Cl03](#): $^{16}\text{O}(^7\text{Li},^6\text{Li})$, E not given; calculated $\sigma(\theta)$; deduced reaction mechanism, model parameters. ^{17}O levels deduced one-nucleon transfer amplitudes. Microscopic DWBA, coupled-reaction channels analyses.

 ^{17}O Levels

<u>E(level)[†]</u>	<u>J^π[‡]</u>	<u>Comments</u>
0	5/2 ⁺	The spectroscopic factor=1.2 for the ground-state transition (1988Ke07).
0.87×10 ³	1/2 ⁺	The spectroscopic factor=0.76 for the 0.87-MeV state transition (1988Ke07).
3.06×10 ³		
3.85×10 ³		
4.55×10 ³		
5.38×10 ³		

[†] Populated in ([1973Sc26](#)).

[‡] From ([1988Ke07](#)).